

### **Abstract of the Disclosure**

A stimulator and a method for the treatment of intractable pain syndromes by electrical stimulation of the spinal cord is disclosed in which implantable electrodes positioned around a targeted area of the spinal cord transmit an interferential current  
5 that has a base medium frequency alternating current between 500Hz-20KHz. A digital signal processor generates a sine-wave-like waveform from a pulse generator which after further processing is used to generate at least two circuits for use in producing the interferential current. An effective area of stimulation is controlled by the quantity of electrodes, positioning of the electrodes and electrode cross pattern  
10 orientation. Amplitude modulation of electrical circuits created at the electrode placements also augments the effective area of stimulation. The stimulator and method reduce accommodation of the body to the electrical stimulation and provide deeper penetration of the resultant signal.